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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/825,323	04/16/2004	Noriaki Shimizu	252064US2	7886
22850 7590 04/02/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER SHECHTMAN, SEAN P	
			ART UNIT	PAPER NUMBER
			2125	
SHORTENED STATUTORY PERIOD OF RESPONSE		NOTIFICATION DATE	DELIVERY MODE	
3 MONTHS		04/02/2007	ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 04/02/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary

Application No.

10/825,323

Applicant(s)

SHIMIZU ET AL.

Examiner

Sean P. Shechtman

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 23-26 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 11-17 is/are rejected.
- 7) ☒ Claim(s) 4-10 and 18-22 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8/3/04</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

1. Claims 1-22 are presented for examination. Claims 23-26 have been withdrawn from further consideration.

Election/Restrictions

2. Applicant's election with traverse of Group I, claims 1-22 drawn to a system, method, and program for executing a process sequence macro in the reply filed on February 20th 2007 is acknowledged. The traversal is on the ground(s) that a search and examination of the entire application would not place a serious burden on the examiner, since a search may be made of a large number of, or theoretically all, subclasses without substantial additional effort. This is not found persuasive because technology center 2100 requires that a search be performed in subclasses that could reasonably have been determined to have a high probability of finding the best reference(s). As such, a search for a program to control operations of two operation inputs units in, for example in subclass 180, is not required for a search for a system, method, and program for executing a process sequence macro. It is not necessary to search areas in which it could reasonably have been determined that there was a low probability of finding the best reference(s) (MPEP 904.02(a)).

The requirement is still deemed proper and is therefore made FINAL.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

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4. Figures 10, 11 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

5. The drawings are objected to under 37 CFR 1.83(b) because they are incomplete (See Page 14, lines 20-23; Page 26, lines 23-25; Page 32, lines 5-6). 37 CFR 1.83(b) reads as follows:

When the invention consists of an improvement on an old machine the drawing must when possible exhibit, in one or more views, the improved portion itself, disconnected from the old structure, and also in another view, so much only of the old structure as will suffice to show the connection of the invention therewith.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

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pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 733. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

7. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

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The abstract of the disclosure is objected to because it is not limited to a single paragraph within the range of 50 to 150 words. Correction is required. See MPEP § 608.01(b).

8. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

The disclosure is objected to because of the following informalities: The claim or claims must commence on separate sheet or electronic page (37 CFR 1.52(b)(3)) (See Pages 16-26 of the instant specification). Appropriate correction is required.

Claim Objections

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9. Claims 4, 6, 8, 10, 18, 20, 22 are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits. Claims 5, 7, 9, 19, 21 are objected to under 37 CFR 1.75(c) as being in improper form because claims in dependent form shall be construed to include all the limitations of the claim incorporated by reference into the dependent claim. See MPEP § 608.01(n). Accordingly, the claims have not been further treated on the merits.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. Claim 14 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 14 recites the limitation "the completion" in line 3. There is insufficient antecedent basis for this limitation in the claim. For purposes of examination, it will be assumed that "the completion" is "a completion".

Claim 14 recites "The substrate processing method of claim 12, wherein the data file also defines an alarming operation for reporting a completion of the control of the operation of each of the devices; and a control of another devices related to the operation of each of the devices." The phrase "and a control of another devices related to the operation of each of the devices" is unclear. For purposes of examination, it will be assumed that the claim recites "The substrate processing method of claim 12, wherein the data file also defines an alarming operation for

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reporting a completion of the control of the operation of each of the devices; and the data file also defines a control of another devices related to the operation of each of the devices.”

Referring to claim 14, lines 4, the limitation “another devices” is unclear. For purposes of examination, it will be assumed that “another devices” is another device.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

11. Claims 1-3, 11, 15-17 rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pat. No. 4,928,221 to Belkhiter (hereinafter referred to as Belkhiter) in view of U.S. Pat. No. 4,757,459 to Lauchnor et al (hereinafter referred to as Lauchnor).

Referring to claims 1, 11, and 15, Belkhiter teaches a substrate processing system, method, and programs operations executed on a computer for performing a processing including a plurality of processes on a substrate by operating a number of devices incorporated in a

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substrate processing apparatus (Col. 1, lines 6-13; Col. 2, lines 45-49; Col. 12, lines 48-55), which comprises:

a storage unit for storing therein commands describing operations of the devices (Col. 13, lines 26-33, macro-program library; Col. 1, lines 44-49, various machining parameters such as feeds and speeds, designed for a specific type of machining operation);

generating a macro file library (Col. 13, lines 26-33) and a generation unit creating a process sequence macro (Col. 1, lines 61-63, part program) by combining the macro files from the library (Abstract, last 7 lines; Col. 3, lines 24-42, macro-program for each process, the processes are taught in a sequence), each of the macro files corresponding to each of the plurality of processes (Col. 3, lines 24-42, macro-program for each process); and

an execution unit for executing the process sequence macro (Col. 3, lines 42-49).

Referring to claim 3 and 16, Belkhiter teaches above, wherein the commands are converted into hard codes (Col. 3, lines 42-49; Col. 1, lines 42-49).

Referring to claims 1, 11, and 15, Belkhiter teaches all of the limitations set forth above, and furthermore, Belkhiter teaches that the macro-programs can be created by a numerical control part programmer of ordinary skill or obtained from a library of macro-programs available at most machine shops (Col. 13, lines 26-33). However, referring to claims 1, 11, and 15, Belkhiter fails to teach a generation unit for generating the macro files from the stored commands.

Referring to claim 17, Belkhiter teaches all of the limitations set forth above, and further teaches the macro files are contained in a library (Col. 13, lines 26-33), however, Belkhiter fails

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to teach the program further operates another storage module for storing the generated macro files on the computer.

Referring to claim 2, Belkhiter teaches all of the limitations set forth above, however, Belkhiter fails to teach the generation unit includes a user interface.

However, referring to claims 1, 11, and 15, Lauchnor teaches a storage unit for storing therein commands describing operations of devices (Col. 7, lines 21-24, for example acceleration); a generation unit for generating macro files from the stored commands (Col. 7, lines 22-27; Col. 5, line 61 – Col. 6, line 14, macros are taught in teaching mode).

Referring to claim 2, Lauchnor teaches the generation unit includes a user interface (Col. 5, line 61).

Referring to claim 17, Lauchnor teaches a program operates another storage module for storing the generated macro files on the computer (Col. 5, lines 52-53).

Belkhiter and Lauchnor are analogous art because they are from the same field of endeavor, machine tool programming.

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to modify the programming system of Belkhiter with macros generating and storing system of Lauchnor.

One of ordinary skill in the art would have be motivated to combine these references because Lauchnor teaches machine tool programming that simplifies the programming of a machine tool without compromising the versatility afforded by keystroke programming (Col. 1, lines 64-68; Col. 2, lines 59-68). Furthermore, Lauchnor teaches that a tool may be customized

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for many different specialized operations by defining associated customized macro sets (Col. 7, lines 43-49; Col. 2, lines 59-68).

12. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belkhiter in view of Lauchnor as applied to claim 11 above, and further in view of U.S. Pat. No. 4,484,286 to Nagamine et al (hereinafter referred to as Nagamine).

Referring to claim 12, Belkhiter teaches the substrate processing method of claim 11, wherein the storage step further stores a data file defining a control of a operation of each of the devices corresponding to the macro files (Col. 3, lines 15-23, computer and expert system shell; Col. 3, lines 24-40, the sequence of operations/processes is a set of data used by the expert system shell, the processes are compared to available macroprograms); the generation step generates the data file (Col. 3, lines 24-26, process planner determines sequence of operations/processes).

Referring to claim 12, Belkhiter teaches all of the limitations set forth above, however, Belkhiter fails to teach the execution step executes the control of the operation of each of the devices based on the generated data file.

However, referring to claim 12, Nagamine teaches a substrate processing system, method, and programs operations executed on a computer for performing a processing including a plurality of processes on a substrate by operating a number of devices incorporated in a substrate processing apparatus (Col. 2, lines 42-54), which comprises: executes the control of the operation of each of the devices based on a data file (Col. 2, lines 63-68; Col. 4, lines 29-41).

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Belkhiter and Nagamine are analogous art because they are from the same field of endeavor, machine tool programming.

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the programming system of Belkhiter with the numerical control system of Nagamine.

One of ordinary skill in the art would have been motivated to combine these references because Nagamine teaches CNC software that allows a user to carry out specialized machining control operations, if the need should arise, without modifying the CNC software, thus making it possible to eliminate the time and labor heretofore required for software modification, and to provide a low-cost CNC that can be tailored to the user's demands (Col. 12, lines 52-67).

13. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Belkhiter in view of Lauchnor in view of Nagamine as applied to claim 12 above, and further in view of U.S. Pat. No. 5,591,299 to Seaton et al (hereinafter referred to as Seaton).

Referring to claim 13, Belkhiter teaches all of the limitations set forth above, however, Belkhiter fails to teach storing the data file twice.

However, referring to claim 13, Seaton teaches a substrate processing method, wherein a storage step further includes another storage step for storing a data file defining the control of the operation of devices (Col. 19, lines 27-30; Col. 4, lines 23-50).

Belkhiter and Seaton are analogous art because they are from the same field of endeavor, machine tool programming.

Therefore, it would have been obvious to one of ordinary skill in the art at the time that the invention was made to further modify the programming system of Belkhiter with the monitoring system of Seaton.

One of ordinary skill in the art would have been motivated to combine these references because Seaton teaches data capture files stored on hard drives of the supervisor computers are periodically automatically uploaded to a large hard drive of an archive computer and deleted from the hard drives of the individual supervisor computers, thereby increasing the number of data capture files that may be stored on the system as well as the amount of time such files may be stored (Col. 3, lines 5-11).

Allowable Subject Matter

14. Claim 14 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter:

Referring to claim 14, while Belkhiter teaches a substrate processing method, wherein the storage step further stores a data file defining a control of a operation of each of the devices corresponding to the macro files (Col. 3, lines 15-23, computer and expert system shell; Col. 3, lines 24-40, the sequence of operations/processes is a set of data used by the expert system shell, the processes are compared to available macroprograms); the generation step generates the data file (Col. 3, lines 24-26, process planner determines sequence of operations/processes).

And, U.S. Pat. No. 4,914,599 to Seki et al teaches macros are composed of a macro name MAC, machining conditions MCD and a macro end (MEND) (Col. 5, lines 49-59).

None of Belkhiter, Lauchnor, Nagamine or Seki, taken either alone or in obvious combination disclose a substrate processing method for performing a processing including a plurality of processes on a substrate by operating a number of devices incorporated in a substrate processing apparatus having all the claimed features of applicant's instant invention, specifically including: the data file also defining an alarming operation for reporting a completion of the control of the operation of each of the devices, and the data file also defining a control of another device related to the operation of each of the devices. It is for these reasons that applicant's invention defines over the prior art of record.

Conclusion

16. The prior art or art made of record and not relied upon is considered pertinent to applicant's disclosure.

The following patents or publications are cited to further show the state of the art with respect to macros are composed of a macro name MAC, machining conditions MCD and a macro end (MEND).

U.S. Pat. No. 4,914,599 to Seki et al.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sean P. Shechtman whose telephone number is (571) 272-3754.

The examiner can normally be reached on 9:30am-6:00pm, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo P. Picard can be reached on (571) 272-3749. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPS

Sean P. Shechtman



March 21, 2007

3/21/07